ERIC Document Resume	See Instruction Sheet	DATE OF RESUME 7/7/65	DATE RECEIVED

A. PUBLICATION DATA

1. ERIC NUMBER	2. ORIGINATOR CONTROL NO(S).	3. IDENTIFICATION NO.	DO NOT WRITE IN SPACE BELOW
ED 00936	8587	OE-34002-9	

4. AUTHOR(S):
None.

5. TITLE OF DOCUMENT ABSTRACTED:
News and Reports, Title VII-New Educational Media, Sixth Special Edition

6. PUBLICATION TITLE:
None.

7. EDITOR(S):
Bergoff, Harvey and Radcliff, Shirley

8. PLACE OF ORIGIN
ORG. Office of Edu.
ST. Dept. of HEW
CITY Washington, DC
TELE. EXT.
INST/LOC CODE

9. PUBLISHER OR SOURCE
U.S. Govt. Printing Office

10. VOL.	11. PAGES	12. MO./YR.	13. TOTAL PP.
N.A.	N.A.	Aug. 63	17

MICROFILM COPY AVAILABLE
YES ☒ NO ☐

COPYRIGHT GRANTED
YES ☐ NO ☒

COPYRIGHT RELEASE FILED
YES ☐ NO ☐

TYPE OF REPORT
PROPOSAL ☐
IN-PROGRESS ☐
FINAL ☒
FOLLOW-UP ☐

OTHER ERIC REFERENCES:

ERIC SATELLITE CODE

B. INDEXING DATA

14. SUBJECT AREA

15. TYPE OF ENDEAVOR
report

16. INDEXING TERMS (6-12)

Office of Edu. P-02	research P-37	audio-visual aids R-21	
Government S-02	teaching methods Y-25		
programs P-22	teaching aids Y-22		

17. ABSTRACT (MAX. 250 WORDS)

This edition of *Title VII News and Reports* includes descriptions of 38 research projects which were funded during fiscal year 1962 under Title VII, Part A, of the National Defense Education Act of 1958. Under this title, the U.S. Commissioner of Education is authorized to provide funds to conduct, assist, and foster research and experimentation in the educational uses of new communications media; more than 200 research projects have been authorized since the program began in July 1958.

NOT AVAILABLE FROM ERIC: CONTACT PUBLISHER

ERIC No.

18. SOURCE OF ABSTRACT

C. FUNDING DATA

19. SUPPORTING ORGANIZATION	20. DIVISION OR DEPT.	21. CONTRACT NO. / PROJECT NO.
	22. TOTAL COST OF PROJECT	
	23. DURATION OF PROJECT	U.S. Department of Health, Education, and Welfare Office of Education

ERIC Form 1

U. S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
Office of Education

This document has been reproduced exactly as received from the person or organization originating it. Points of view or opinions stated do not necessarily represent official Office of Education position or policy.

8587

TITLE VII—NEW EDUCATIONAL MEDIA

News and Reports

U.S. DEPARTMENT
OF HEALTH,
EDUCATION,
AND WELFARE
Office of Education

Title VII, of the National Defense Education Act (Public Law 85–864), provides for Research, Experimentation, and Dissemination of Information for more effective utilization of television, radio, motion pictures, and related media for educational purposes.

OE–34002–9
August 1963

SIXTH SPECIAL EDITION

Introduction

Under Title VII, Part A, of the National Defense Education Act of 1958, the U.S. Commissioner of Education is authorized to provide funds to conduct, assist, and foster research and experimentation in the educational uses of new communications media. This edition of *Title VII News and Reports* includes descriptions of 38 research projects which were funded during fiscal year 1962, after having been recommended for approval by the Advisory Committee on New Educational Media. More than 200 research projects have been authorized since the program began in July 1958.

All project descriptions have been reviewed by the project directors concerned. Further information on individual projects and permission to use these project descriptions for publication should be requested from the project directors, whose names appear with each description.

Projects are arranged in numerical sequence, followed by an index of location, principal investigator, medium, subject, instructional level, and audience characteristics.

Although Part A of Title VII has been primarily a grant program, its authority to enter into contracts was used initially during fiscal year 1962 for the support of four projects. These are indicated by the letter C preceding the project number. All others are grant awards.

Information on contract dissemination programs (under Part B of Title VII) and lists of other publications can be obtained from the Educational Media Branch, U.S. Office of Education, Washington, D.C., 20202.

Harvey Liebergott,
Shirley Radcliffe,
Editors

8587

withdrawn
ED000938

Contents

	Page
INTRODUCTION	1
DESCRIPTION OF PROJECTS	3
INDEX	13
Numerical List of Projects	13
Grantees Location, by State	15
Principal Investigators	16
Type of Projects	17

UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON: 1963

Description of Projects

835. A COMPARISON OF PROGRAMED INSTRUCTION WITH FACE-TO-FACE PROCEDURES IN COUNSELING

Purpose: To study the effects of programing on the cognitive aspects of the counseling process.

Procedure: Two hundred university freshmen who have applied for individual precollege counseling will be selected. Each of four clinical psychologists will be assigned 25 of the students for counseling under three conditions: (1) normal counseling prior to counselor experience with programed materials, (2) simulated programed counseling, and (3) normal counseling after counselor experience with programing. The remaining 100 students will be assigned to a programed book for a single "interview." All interviews will be recorded.

Data: Pre- and post-tests will be administered and a followup questionnaire distributed before and after counseling to secure data about student self-perception and counselor flexibility. Statistics will include analysis of variance or other appropriate tests of significance and correlation techniques.

Beginning and Ending Dates: January 1962 to December 1964

OE Grant: $49,789

Grantee: University of Illinois, Urbana, Ill.

Principal Investigators: William M. Gilbert, Director, Student Counseling Service; Thomas N. Ewing, Associate Director, Student Counseling Service

837. KINESCOPIC RECORDINGS AS SITUATIONAL TESTS AND LABORATORY EXERCISES IN EMPATHY

Purpose: To find out whether kinescopes of counseling situations can be developed for the effective training and evaluation of empathic behavior in counselors.

Procedure: Twenty counselor trainees who are at the end of their master's degree program in guidance and school counseling will be given a series of kinescopic training exercises. The trainee group will be compared to three other groups: Two control groups, one of which comprises 20 counselor trainees enrolled in a practicum course; the other, 40 graduate students enrolled in the course "Techniques of Counseling," and one criterion group composed of recognized and experienced counselors noted for their empathy. The control and criterion groups will not receive kinescopic training exercises and will be rated by recognized and experienced counselors and counselor educators.

Data: Criterion measures will include the Rating Scale of Empathic Behavior, developed by the staff of the Guidance Laboratory Division of Teacher Education, City University of New York, and the Empathy Test, constructed by using photographs taken of television plays and the simultaneous recording of the dramatic dialog. Statistics will include analysis of variance.

Beginning and Ending Dates: January 1962 to December 1964

OE Grant: $83,069

Grantee: Hunter College, New York, N.Y.

Principal Investigator: Herbert Schueler, Director of Teacher Education

841. THE INFLUENCE OF NOVELTY EFFECT UPON TEACHING MACHINE LEARNING

Purpose: To find out how much influence novelty effect would have upon the effectiveness of learning in a self-instructional situation.

Procedure: Two groups of sixth-grade pupils were matched at the beginning of the school year according to pupils' scores on the California Test of Mental Maturity and the SRA Arithmetic Test. For one semester, one group of 11 pupils devoted three 30-minute periods a week to an algebra program via a teaching machine. This group will hereafter be referred to as the low novelty effect group. The second group of 12 pupils was introduced to comparable algebra topics by the regular classroom teacher without the aid of a teaching machine. This group will hereafter be referred to as the high novelty-effect group. During the second semester, both groups devoted three 30-minute periods per week to an elementary geometry program via a teaching machine. Pupils in the high and low novelty-effect groups were randomly assigned in equal proportions to four teaching machine work groups who used the six available teaching machines at different times.

Data: The criteria included the students' gain scores which were obtained from an initial geometry test administered at the beginning of the second semester and from two other tests administered in the middle and at the end of the semester.

Results and Conclusions: On the basis of the two criterion tests, one administered early in the experiment and one administered several months later, no difference between the two groups was discovered. The researcher concludes that novelty effect is of no importance in the learning situation, but cautions that the results of a single study are far from conclusive. He states that we must await the results of further study before the novelty-effect variable can be excluded from consideration in the programed learning research.

Beginning and Ending Dates: December 1961 to December 1962

OE Funds: $2,839

Contractor: San Francisco State College, San Francisco, Calif.

Principal Investigator: Dr. W. James Popham, Assistant Professor, Division of Education.

843. THE EFFECTIVENESS OF COLOR PHOTOGRAPHS IN PROGRAMED INSTRUCTION

Purpose: To determine the relative effectiveness of pictorial materials and nonpictorial materials in a self-instructional program on library use for college students.

Procedure: Freshman students will be assigned randomly to two groups: Group 1, the control group, will be taught how to use the library through a pictorial program, and group 2, the experimental group, will receive the same program without pictorial content. Both groups will have a performance criterion test on an individual basis.

Data: Pre- and post-tests on knowledge of library usage, and a performance criterion test on ability will be administered. Interitem time, total time, and an analysis of errors and choices will be taken from the print-out tape record provided by the instructional device used. Statistical procedures will include *t*-tests analysis of covariance where needed.

Beginning and Ending Dates: December 1961 to December 1963

OE Grant: $2,560

Grantee: Southern Illinois University, Carbondale, Ill.

Principal Investigator: Grosvenor C. Rust, Assistant Professor

845. THE DEVELOPMENT OF ABSTRACT THINKING IN CHILDREN THROUGH PROGRAMED INSTRUCTION

Purpose: To determine: (1) The optimum properties of a program specially designed to teach abstract thinking. (2) The extent to which it is possible, through programing, to accelerate the abilities to discriminate and to generalize the conceptual properties and relationships of geometric figures and to increase flexibility of thought concerning such properties. (3) The effects of three types of programs at different age levels on the development of the abilities listed above and the ability to verbalize. (4) The pattern of development of these abstract thinking abilities in individual students.

Procedure: Alternate versions of the program will be developed and tested. One hundred and ninety-two third-, sixth-, and ninth-grade pupils matched on pretest performance and sex will be divided into four groups: (1) pictorial programed instruction, (2) integrated verbal and pictorial programed instruction, (3) verbal programed instruction, and (4) an untreated control group.

Data: Pre- and post-tests will be administered. Statistics will include analysis of variance and correlation techniques.

Beginning and Ending Dates: December 1961 to November 1962

OE Grant: $2,875

Grantee: The University of Rochester, Rochester, N.Y.

Principal Investigator: Arthur W. Krauser, Graduate Research and Teaching Assistant, Department of Psychology

847. GROUP VERSUS INDIVIDUAL PACING IN PROGRAMED INSTRUCTION

Purpose: To compare the average learning of individual- and group-paced programed instruction under conditions of homogeneous and heterogeneous grouping.

Procedure: Ninth-grade algebra students who were matched on the basis of their performance on the Primary Mental Abilities Test and the Orleans Algebra Prognosis Test were assigned to four groups of 11 students each. Two groups were homogeneously determined on the basis of intelligence quotient and algebra ability; the remaining two groups were heterogeneous. One homogeneous group and one heterogeneous group were group-paced; the remaining two were individually paced. The groups were given two sections of a linear algebra program. The criterion was perfect completion of a posttest.

Data: Nonparametric statistical procedures were used. A record was kept of the student's working time and item response. The group-paced students passing the posttest were dismissed. Those who failed were required to review the materials, beginning at the point in the program that was understood by all the students. For the individually-paced students, the procedure was to repeat that part of the program with which they were having difficulty, log the extra time, which was later added to the total learning time, and take a different form of the posttest. Of the 44 students, 13 had to have at least one review session and 2 required a second review session.

Results: (1) The time required by the heterogeneous group-paced students was significantly greater than that of the heterogeneous individually-paced students. (2) The time required to complete the program by the homogeneous group-paced students did not differ significantly from that required by the homogeneous individually-paced group. (3) The time required to complete the program by the heterogeneous group-paced students was significantly greater than that required by the homogeneous group-paced students.

Beginning and Ending Dates: December 1961 to December 1962

OE Funds: $2,875

Contractor: Oregon State System of Higher Education, Monmouth, Oreg.

Principal Investigator: Charles H. Frye, Research Assistant

850. THE IDENTIFICATION OF EFFECTIVE TELEVISION TEACHERS

Purpose: To determine how to identify an effective television teacher.

Procedure: Using factor analysis, a television teacher-trait scale will be constructed from teacher personality reports made by more than 600 men and women representing a cross section of students at Syracuse University. The teacher-trait scale will be further refined by a series of television teaching experiments. The effectiveness of the scale will be determined by the extent that the television teacher induces changes of mood in students. Comparisons will be made between classes taught over closed-circuit television and those taught in the classroom. Personality characteristics of students will be related to television-teacher characteristics and communication-induced changes of mood.

Data: The Activities Index, developed at Syracuse University, will be used to estimate the characteristic behavior patterns related to the personalities of students exposed to the television instruction. The Mood Adjective Check List, developed at the University of Rochester, will be used to obtain a record of students' moods. Statistics will include factor analysis and analysis of variance.

Beginning and Ending Dates: January 1962 to June 1964

OE Grant: 853,880

Grantee: Syracuse University, Syracuse, N.Y.

Principal Investigator: Lawrence Myers, Jr., Associate Professor of Television and Radio

863. STUDENT RESPONSE TO LINEAR AND BRANCHING SEQUENCES IN CONVENTIONAL AND PROGRAMED TELEVISION INSTRUCTION

Purpose: To study the effects that certain combinations of programed learning variables have on student learning by means of conventional and programed modes of television instruction.

Procedure: Preliminary to the study will be the preparation of three 20-minute speech and six 50-minute statistics lessons and the construction of appropriate tests involving both direct learning and transfer. Freshman speech students and elementary statistics students will be randomly assigned to the treatment groups. The speech students will be divided into seven groups, each of which will receive instruction by one of the methods listed below. Each of the elementary statistics groups will receive instruction by all seven of the following methods. The comparison among the methods will be on an individual basis. The seven methods of instruction that will be used are: (1) Instructor-developed presentation. (2) Instructor-developed presentation interjected with multiple-choice items. The student responses will not be reported to the instructor. (3) Instructor-developed presentation interjected with multiple-choice items and student responses reported to the instructor through an electronic device. (4) A set linear programed presentation in which the instructor gives the correct response. (5) A set linear programed presentation with overt student response and immediate feedback to the student of the correct response. (6) A set linear programed presentation with overt, multiple-choice student response and immediate feedback to the student of the correct response. (7) A branching programed presentation with multiple-choice questions and overt student response to modify the program.

Data: Achievement will be measured by tests administered at the end of each presentation. Statistics will include analysis of variance.

Beginning and Ending Dates: June 1962 to December 1963

OE Grant: 842,820

Grantee: Ohio University, Athens, Ohio

Principal Investigator: F. Craig Johnson, Director, Instructional Television Research

868. THE EFFECTIVENESS OF THE DOCUMENTARY SOUND-FILM AS A SUPPLEMENT IN SECONDARY SCHOOL TEACHER EDUCATION

Purpose: To determine whether films can assist in teaching skills, attitudes, and understandings in secondary teacher education.

Procedure: As a followup to project No. 217, in which two groups of student teachers were compared relative to the effectiveness of training films, the original participants now teaching will be located. Their teaching performance will be observed and evaluated by their principals. The researcher will follow up and interview in depth the principals and participating teachers.

Data: Teaching performance will be measured by an evaluative checklist developed during the original experiment. Statistics will include analysis of variance.

Beginning and Ending Dates: September 1962 to August 1962

OE Grant: 827,071

Grantee: The Pennsylvania State University, University Park, Pa.

Principal Investigator: Robert B. Patrick, Professor of Education

872. AN EVALUATION OF PROCEDURES FOR INDIVIDUALIZING GROUP INSTRUCTION BY TELEVISION

Purpose: To determine whether the efficiency of group instruction over television can be increased through the preparation of lesson material designed specifically for homogeneous subgroupings. The principal aim is to attempt to provide for better accommodation of individual differences than is possible in heterogeneous groupings.

Procedure: The basic approach calls for: (1) a determination of an optimum number of homogeneous subgroupings, (2) methods of altering instructional sequences specifically for the homogeneous groups; and (3) a comparison of the effectiveness of the individualized approach with that involving heterogeneous groups.

Data: Data will include individual error rates, immediate and delayed tests of achievement, acquisition, and retention of factual material, and understanding of concepts and principles. Sampling will be on an individual basis and the statistical technique will be analysis of variance.

Beginning and Ending Dates: January 1962 to June 1963

OE Grant: $104,564

Grantee: Metropolitan Pittsburgh Educational Television Stations (WQED–WQEX) Pittsburgh 13, Pa.

Principal Investigator: George L. Gropper, Associate Program Director, American Institute for Research

873. CONTINUED DEVELOPMENT OF A THEORETICAL MODEL FOR PROGRAMED LEARNING OF LANGUAGES

Purpose: The objectives of the study are as follows: (1) To trace the causal relationship between guessing behavior and language learning. (2) To replicate in other languages earlier research which showed a relationship between guessing behavior and language learning in Spanish. (3) To continue developing a theoretical model of language learning.

Procedure: One set of undergraduate students (N-40) will be administered predictor measures (Modern Language Aptitude Test, Otis, work sample tests, and a guessing measure) and then will be assigned randomly to one of two experimental groups. One group (N-20) will learn four Japanese vocabulary lists in the sequence of auditory learning followed by visual relearning. The other group (N-20) will reverse the sequence by first learning visually, then relearning aurally.

Another set of students (N-40) will replicate this procedure with the Russian language.

Data: The learning data will be classified in errors, and the statistical analysis will include correlation and tests of significance as analysis of variance.

Beginning and Ending Dates: December 1961 to November 1963

OE Grant: $23,652

Grantee: San Jose State College, San Jose, Calif.

Principal Investigator: James J. Asher, Associate Professor of Psychology

875. PERCEPTION AND TELEVISION: A STUDY OF THE PHYSIOLOGICAL FACTORS OF TELEVISION VIEWING

Purpose: To study (1) certain basic eye movement tendencies which operate in televiewing situations, and (2) certain relationships between eye movements in watching instructional televiewing and recall.

Procedure: A sample composed of 40 ten-year-old children will view television lessons. To register where each child is looking, a head-mounted eye camera will be used to mark the position of the line of sight onto a photographic image of the scene.

Data: Pre- and post-tests will be administered to determine the extent of knowledge before and after the showing of the film. An analysis will be made of the degree of comprehension and: (1) The frequency of fixations per scene. (2) The pause duration per scene. (3) General movement patterns for the lesson. (4) Distractibility measures. Appropriate correlation techniques will be used.

Beginning and Ending Dates: December 1961 to November 1963

OE Grant: $60,590

Grantee: The Ohio State University Research Foundation, Columbus, Ohio

Principal Investigators: Willavene Wolf, Assistant Professor of Psychology; Egon. G. Guba, Professor and Head, Bureau of Educational Research and Service

876. AN EVALUATION OF TWO METHODS USING MAGNETIC TAPE RECORDING FOR PROGRAMED INSTRUCTION IN THE ELEMENTAL MATERIALS OF MUSIC

Purpose: To evaluate the effectiveness of two methods of programed instruction and two methods of response in learning music skills.

Procedure: The instruction programed on magnetic tape will be presented to four groups of freshman students matched on four separate music test scores, general scholastic measures, sex, and age. Group I will receive aural stimuli and will give written responses; Group II will receive visual stimuli and will give voice responses which will be recorded on tape; Group III will receive aural stimuli and will give voice responses which will be recorded on tape, and Group IV will receive visual stimuli and will give written responses. Immediately following each response, each group will be given the correct identification in the same mode as its response. Thus, the instructional pattern will be stimulus presentation—student response—reinforcement.

Data: Pre- and post-tests developed at the Ohio State University will be used to measure the learned skills in the perception and comprehension of intervals, rhythms, and tone groups. Statistics will include an analysis of covariance.

Beginning and Ending Dates: January 1962 to December 1963

OE Grant: $56,500

Grantee: The Ohio State University Research Foundation, Columbus, Ohio

Principal Investigator: Charles L. Spohn, Associate Professor, School of Music

880. RECORDED PROGRAMED INSTRUCTION IN CREATIVE THINKING FOR THE FOURTH GRADE

Purpose: To determine whether creativity in fourth-grade children can be stimulated and sustained through audio tapes.

Procedure: The experimental sample will consist of at least 20 fourth-grade classes matched against control groups in size, ability, and racial and socioeconomic characteristics. The experimental groups will be administered a series of audio tapes or discs.

Data: Standardized achievement tests, a battery of creative thinking tasks, checklists of creative activities, and Hoyt's "How I Like School" will be administered at the beginning and end of the experimental program.

Beginning and Ending Dates: December 1961 to November 1963

OE Grant: $55,514

Grantee: University of Minnesota, Minneapolis, Minn.

Principal Investigator: E. Paul Torrance, Director, Bureau of Educational Research

886. THE CLASSROOM SIMULATOR: A NEW DIMENSION IN TEACHER EDUCATION

Purpose: To determine the operational requirements for an effective classroom simulator for teacher education.

Procedure: Forty students in elementary education, whose pretests indicate a need for supplemental instruction, will be assigned for approximately 15 weeks to four experimental groups for student teaching through the classroom simulator. Filmed problem sequences of actual classroom situations will be presented in the simulation facility, and the student teacher will be asked to react. The experimenter will select the appropriate feedback sequence which shows how the pupils will react to the student teacher's response. The sequences will be used repeatedly until the student teacher reaches the desired level of behavior. The variations of the four groups will be large and small motion pictures and prints.

Data: Both the rate of learning and the ability of the student teachers to apply the newly learned principles and skills in novel situations will be analyzed. The ability ratings in terms of accurate assessment of the situation, adequate response, and effective timing will be the primary basis for determining the effectiveness of the four experimental conditions. Statistics will include analysis of variance.

Beginning and Ending Dates: January 1962 to June 1963

OE Grant: $16,601

Grantee: Teaching Research, Oregon State System of Higher Education, Monmouth, Oreg.

Principal Investigator: Bert Y. Kersh, Associate Research Professor

891. A FIELD EXPERIMENTAL STUDY OF EDUCATIONAL TELEVISION

Purpose: To find out whether children can serve as agents in influencing the family viewing of educational television.

Procedure: Broadcast educational television will be integrated with the teaching of social studies in the 10th grade. One group of students will receive pamphlets and other materials discussing forthcoming public affairs programs as classroom stimulants to viewing. A second group will receive direct-mail information in their homes immediately prior to the telecasting of the public affairs programs. A third group will be exposed to both classroom stimulation and direct mail, and a fourth group will not receive any information and will serve as the control group. Approximately 550 students will participate. Personal data about the students and their families will be collected.

Data: Information will be gathered from interviews immediately preceding and after the study and 2 months later. Statistics will include chi-square, other nonparametric treatments, and correlational techniques.

Beginning and Ending Dates: January 1962 to September 1963

OE Grant: $43,943

Grantee: University of Minnesota, Minneapolis, Minn.

Principal Investigator: Roy E. Carter, Jr., Director, Communication Research Division, School of Journalism

899. REQUIREMENTS FOR GRAPHIC TEACHING MACHINES

Purpose: To compare the effectiveness of graphic and symbolic displays under the conditions of reinforcement advocated by Skinner.

Procedure: Graphic and symbolic programed learning sequences will be developed for six mathematical concepts. The six concepts will be developed by means of: (1) symbolic display and response, (2) graphic display and symbolic response, and (3) graphic display and response. Each student in a group of 80 college and 80 secondary-school students will learn half of the concepts from the graphic sequence and half from the symbolic. Within each experimental group, one-half of the students will be presented the graphic sequence for a given concept; the other half will learn the same concept from the symbolic sequence. Each student will make graphic responses to two of three graphic display programs and symbolic responses to the third. He will make symbolic responses to all of the symbolic programs.

Data: Data will include error rates and achievement tests. Statistics will include analysis of variance.

Beginning and Ending Dates: December 1961 to November 1962

OE Grant: $33,350

Grantee: Northeastern University, Boston, Mass.

Principal Investigator: Albert E. Hickey, Research Associate Director, Automated Teaching Project

907. DIRECTED DISCOVERY VERSUS PROGRAMED INSTRUCTION

Purpose: To compare the "discovery" method and a group-paced program in teaching the distributive law in mathematics.

Procedure: A programed modification of an existing unit modeled on the University of Illinois Committee on School Mathematics "discovery" method will be developed. Sixty fifth-grade pupils selected on the basis of ability and mathematics achievement will be randomly assigned to four groups of 15 each. One group will be taught the distributive law by the discovery method, another by programed instruction using a classroom communications

system. The experiment will be replicated with the remaining two groups. The same instructors will teach all four groups, but they will exchange methods during the replication of the experiment.

Data: The dependent variables will be rate of learning, recall, and transfer of learning, and will be measured as follows: (1) Rate of learning will be the time it takes the pupil to reach the criterion of achievement. (2) Recall will be measured by a posttest consisting of problems similar to the ones during the learning period. The posttest will be administered to one-third of each group 2 days after the completion of the formal learning period, to a second third of each group 2 weeks afterward, and to the final third of each group 8 weeks later. (3) Transfer of learning will be determined by a posttest after initial learning which will consist of each student's being individually assigned a new learning task in mathematics. A record will be made of each student's response thus providing a verbal record of the thought processes of each one. Statistics will include *t*-tests, chi-square, and correlation techniques.

Beginning and Ending Dates: January 1962 to June 1963

OE Grant: 89,876

Grantee: Teaching Research, Oregon State System of Higher Education, Monmouth, Oreg.

Principal Investigator: Bert Y. Kersh, Associate Research Professor

886. MEASUREMENT PROCEDURES IN PROGRAMED INSTRUCTION

Purpose: To study measurement procedures in programed instruction as a means of permitting students to reach an instructional objective by the most efficient route.

Procedure: Selected students in the third to sixth grades will receive programed instruction in punctuation, capitalization, and fractions. The procedure is as follows: (1) The student takes a pretest on the unit of instruction. If he passes the test, he goes immediately to a similar test on a second unit of instruction. (2) If the student fails the self-scoring test, he is directed to a panel of a paragraph or more for study and takes a second test. If he passes the test, he goes on to the test on the next unit. (3) If the student fails the test, he is directed to a linear program of instruction. (4) The student is again tested and goes on to the next unit or is given remedial instruction.

Data: Time spent on the program and posttest results are the dependent variables. Pre- and posttests immediately and 2 weeks after completion of the program will be administered. Statistics will include analysis of variance or covariance.

Beginning and Ending Dates: January 1962 to December 1963

OE Grant: $43,933

Grantee: Arizona State University, Tempe, Ariz.

Principal Investigators: Richard E. Schutz, Director, Testing Service; Robert L. Baker, Professor of Educational Psychology

914. THE EFFECTS OF AUTOMATED INFORMATION RETRIEVAL ON UNIVERSITY STUDENTS

Purpose: To identify the side effects of using electronic information retrieval techniques in a sociology course.

Procedure: A section of a course in social problems will be assigned to the experimental group and another to the control group. Each of the groups will comprise approximately 80 students. The experimental group will use an automated information retrieval system and the usual library facilities in the preparation of a term paper. The control group will use only the usual library facilities.

Data: Criterion measures will include: (1) A specially constructed objective test of incidental learning. (2) Evaluation of the term paper by a five-man panel. (3) Course-content examinations. (4) Attitude scales. The relationship of the effects of the information retrieval system to scholastic aptitude and creativity will also be estimated. Statistics will include analysis of covariance.

Beginning and Ending Dates: September 1962 to August 1963

OE Grant: $55,665

Grantee: University of Arizona, Tucson, Ariz.

Principal Investigator: I. Roger Yoshino, Associate Professor of Sociology

939. ASSESSMENT OF A SELF-TEACHING TECHNIQUE BASED ON A COMBINATION OF PROGRAMED INSTRUCTION AND THE CASE STUDY METHOD

Purpose: To develop and test in a graduate school law course a teaching technique based on a combination of programed instruction and the case-study method.

Procedure: The fall 1962 enrollees in graduate school law classes at four Pennsylvania universities—estimated at about 80—will be randomly assigned to one of three groups: (1) Case Study—Programed—Overt Response Group. (2) Case Study—Programed—Covert Response Group. (3) Case Study—Discussion Group. Groups 1 and 2 will individually read the case-study materials and respond to the programed material either by writing the response (overt) or by silent response (covert). Knowledge of results will be provided to all subjects in both groups. Group 3 will read the same case-study materials and then through group discussion try to arrive at the principles of law involved. As far as possible, the discussion will parallel the content of the programed material.

Data: Personal data for each enrollee will be gathered: age, sex, and teaching experience or administrative experience. Pre- and posttests will be administered. Student opinions, tape-recorded discussion, and individual rates of progress will be analyzed. Statistics used will be significant differences in achievement and retention determined by analysis of covariance, and significant

preferences in relation to achievement, education, and experience by the chi-square test.

Beginning and Ending Dates: June 1962 to May 1963

OE Grant: $2,875

Grantee: University of Pittsburgh, Pittsburgh, Pa.

Principal Investigator: Hugh F. McKeegan, Coordinator of Programed Instruction Projects, Department of Public Instruction, Harrisburg, Pa.

946. RESEARCH IN DEGREE OF STUDENT CONTROL OVER PROGRAMED INSTRUCTION: INITIAL AND CUMULATIVE EFFECTS OF SELF-DIRECTION AND SELF-EVALUATION OF PROGRESS

Purpose: To discover what techniques of student self-direction and self-evaluation in programed instruction are the most effective for initial and cumulative learning.

Procedure: The study will be developed as follows: (1) An appraisal will be made of learning tasks ordinarily assigned students to determine which subject matter or learning tasks seem to require substantially different learning processes from others. (2) Pilot studies will be made to find out the techniques of student self-evaluation and self-direction which seem most promising for each of the prototype learning topics. One or two hours' worth of learning material will be prepared in formats suitable for the various techniques to be tried. (3) After the techniques are tried out on several individual students, and the least promising ones dropped, there will be a revision and refinement of the retained techniques. (4) The best two or three combinations of self-evaluation and or self-direction techniques will be compared in a classroom of 20 to 30 students against a control group.

Data: Analysis of covariance will be used to assess the main effects of various components of the total procedures as well as the effects of individual student characteristics such as aptitude, personality, and motivation. Correlational analyses will be used to determine the degree of relation between self-evaluation and test evaluation during learning, and to determine what forms of evaluation best predict the level of criterion performance.

Beginning and Ending Dates: June 1962 to August 1963

OE Grant: $66,053

Grantee: American Institute for Research, Pittsburgh, Pa.

Principal Investigator: Leslie J. Briggs, Program Director for Instructional Methods

960. STUDY OF CHARACTERISTICS CONTRIBUTING TO THE EFFECTIVENESS OF VISUAL DEMONSTRATIONS

Purpose: To determine the effect of forced attention to detail in slides on cognitive learning.

Procedure: Approximately 200 college, secondary- and elementary-school students will be randomly assigned to two groups which will view demonstrations by one of the following methods: (1) A slide which shows the object or process with maximal accuracy. (2) A series of slides in which each component of the object or process corresponding to the narrative will be highlighted against a subdued background.

Data: The effects of the demonstrations will be evaluated by the students' performance on specially prepared examinations. Statistics will include chi-square and analysis of variance.

Beginning and Ending Dates: June 1962 to August 1964

OE Grant: $37,081

Grantee: Rensselaer Polytechnic Institute, Troy, N.Y.

Principal Investigator: G. W. Boguslavsky, Professor of Psychology

961. ADMINISTRATIVE AND INSTRUCTIONAL ADJUSTMENTS RESULTING FROM THE USE OF PROGRAMED MATERIALS

Purpose: To identify and evaluate the administrative and instructional adjustments resulting from the use of programed materials in the public schools of Pennsylvania.

Procedure: A survey of all public elementary and secondary schools in Pennsylvania will be made in 1962 to identify schools using programed instructional materials during the 1962–63 school year. In early October, a survey questionnaire will be mailed to approximately 100 individuals knowledgeable in the use of programed instructional materials to determine the administrative and instructional adjustments needed or recommended. The data from this questionnaire will be used to construct subsequent scales and questionnaires appropriate for classification of schools in terms of their use of these materials. These instruments will be sent to the school administrators and teachers who are currently using programed materials. A classification and selection of schools will be made following the return and analysis of data obtained from the scales and questionnaires. Schools will be placed in a continuum from "most effective" to "least effective" according to their use of programed materials. Approximately 15 schools from both extremes of this continuum will be matched in respect to relevant variables. The 30 schools will be visited for case studies. During the visits to the selected schools, the project staff will administer informational and attitudinal inventories to the students and teachers using programed materials. These instruments will be developed to ascertain the educational outcomes (dependent variables) of programed materials as they are utilized in the selected schools.

Data: Statistics will include correlational techniques, chi-square, and other appropriate nonparametric statistics.

Beginning and Ending Dates: June 1962 to December 1963

OE Grant: $17,710

Grantee: Department of Public Instruction, Harrisburg, Pa.

Principal Investigators: N. Sidney Archer, Research Supervisor, State Council Projects; Samuel M. Sanzotto, Curriculum Director, Cumberland Valley School System

691-035 O—63——2

962. VARIATIONS IN INSTRUCTIONAL MEDIA, PROCESSES, CONTENT, AND APTITUDE VARIABLES IN RELATION TO EFFICIENCY OF COGNITIVE GOAL ATTAINMENT

Purpose: To measure the effects and interactions of audiovisual media, methods of teaching, content, and aptitude against cognitive learning.

Procedure: The procedure will be as follows: (1) A paradigm of cognitive goals will be structured, and (2) based on the paradigm, instructional sequences will be programed for particular topics according to the programing theories of each of the following: Pressey, Skinner, Crowder, Silberman-Coulson, and a programed lecture. The tryout of each program will involve at least 5 subjects to a group and two replications, or a total of 150 subjects randomly assigned to various treatments according to a balanced incomplete block design. Also based on the goals paradigm will be a one-semester course in computer programing in which the following will be used: programed lecture and self-instructional programs according to the theories of Pressey, Crowder, and Silberman–Coulson.

Data: Apparatus will automatically record individual student responses, time per response, and sequence of responses. Achievement examinations will be given after each lesson, after each topic or group of lessons, and over the entire course. Multivariate analyses of these data will explore the relationships among the goal, aptitude, and instructional sequence variables. Analyses of test results will be in terms of conventional statistics. Problem-solving strategies will be explored by measures of quantity of information per step rate of convergence to a solution, error-distance relationships, and efficiency in terms of comparison with optimal path. Logical trees and decision tables of solutions form the bases of these derived measures. A model, or theory summarizing the findings will be constructed in the form of a digital simulation program. Results of simulation runs on the computer will be compared with empirical findings. Revisions in the simulation program will be made as needed. The simulation program then will be used to generate statistical hypotheses to be tested by appropriate statistical experimental designs.

Beginning and Ending Dates: June 1962 to December 1964

OE Grant: $111,986

Grantee: Indiana University, Bloomington, Ind.

Principal Investigator: Nicholas Fattu, Director, Institute of Educational Research

968. INDIVIDUAL TUTORING TECHNIQUES FOR THE DEVELOPMENT OF PROGRAMING METHODS AND THEORY

Purpose: To develop a set of systematic rules and generalizations for building an effective branching structure into a program and for improving the main stream items; to determine the ways in which the rules differ: (1) for elementary as contrasted with secondary school children; (2) for verbal as compared with quantitative subject matter; (3) for children of different abilities, and (4) for learning objectives requiring different degrees of transfer; and to find and verify experimentally a theory which best explains the rules.

Procedure: Four programs will be used, two each at the elementary and secondary levels. At each grade level, one program will be in the verbal skills area, the other in a quantitative subject-matter area. The proposed study would consist of two main phases: (1) successive empirical revision of the original programs on the basis of tutorial sessions until clear superiority of the revised version over the original may be discerned; and (2) a survey of current theoretical systems to determine which one would have probably predicted the generalization obtained from the analysis of the program revisions. A formal experiment will be conducted to determine the validity of new hypotheses derived from the selected theory.

Beginning and Ending Dates: June 1962 to November 1963

OE Grant: $76,314

Grantee: System Development Corporation, Santa Monica, Calif.

Principal Investigators: Harry Silberman, Head, Instructional Systems Group, Automated Education Project; John E. Coulson, Associate Head, Education Research and Development Project

971. MOTION PICTURES AS TEST STIMULI: AN APPLICATION OF NEW MEDIA TO THE PREDICTION OF COMPLEX BEHAVIOR

Purpose: To find out whether motion picture tests are more effective than traditional tests in predicting the classroom behavior of elementary school student teachers.

Procedure: Approximately 100 elementary school student teachers will take four predictive tests prior to their student teaching: (1) the Minnesota Teacher Attitude Inventory; (2) a situational-response test using word description (Word Test); (3) a situational-response test using motion pictures (Film Test); and (4) a simulation test using motion pictures.

The two situational-response measures (word and film tests) will be administered first. The sequence of the word and film tests will be assigned randomly. The order of the remaining two tests will always be the same. Each student will be observed for 3 half-days in the classroom during the last half of student teaching. Variance due to age, sex, and intelligence will be controlled statistically.

Data: The teaching performance of the student will be compared against the four predictive measures. Multiple regression analysis techniques will be used to identify the test which is contributing most to the prediction of classroom behavior.

Beginning and Ending Dates: September 1962 to August 1964

OE Grant: $44,129

Grantee: Teaching Research, Oregon State System of Higher Education, Monmouth, Oreg.

Principal Investigators: Henry D. Schalock, Associate Professor of Child Development and Family Life, Oregon State University; James H. Beaird, Assistant Research Professor, Teaching Research

977. AN EXPLORATION OF NONWORDAL PROGRAMING IN MATHEMATICS AND SCIENCE

Purpose: To demonstrate the feasibility of nonwordal learning sequences in mathematics and science and to explore the interaction between wordal and nonwordal sequences. A nonwordal program is one which uses symbols and graphical-pictorial stimuli rather than words.

Procedure: A nonwordal sequence for conditioning behaviors related to the concept of vectors has been constructed and used with some success to teach fifth-grade pupils. In the process of program development, an approach was adopted which provides in part for individual differences and which is called the penetration series, a series of similar tasks at the same level or step in the program. The pupils skip the frames of the series which follow the ones they answer correctly. The series provide a measure of understanding during learning which appears to correlate with criterion performance. After revision of the program and exploration of the use of wordal sequences and their interaction with nonwordal ones, some investigation will be undertaken regarding the construction of responses to be scheduled intermittently.

Beginning and Ending Dates: June 1962 to June 1963

OE Grant: $9,718

Grantee: Earlham College, Richmond, Ind.

Principal Investigator: M. Daniel Smith, Coordinator of Self-Instruction

978. PROGRAMED INSTRUCTION FOR THE CORRECTION OF WRITTEN LANGUAGE IN ADOLESCENT DEAF STUDENTS

Purpose: To determine whether errors frequently occurring in the written language of the adolescent deaf can be replaced by correct syntax through programed learning.

Procedure: The written language of 500 deaf adolescent students will be analyzed and the most frequently occurring errors determined. A set of 10 programs will be developed covering the most common syntactical errors made by deaf adolescents. Two experimental groups and a control group, each consisting of approximately 75 subjects, will be selected from several schools for the deaf.

Once a week, language teachers will give assignments involving the writing of original language. Experimental group I will be assigned two programs following each composition until the student has completed all ten. This experimental period will terminate after 5 school weeks. Experimental group II will also be assigned two programs following each composition, but over a 6-month experimental period. The first two errors to occur in the composition will be selected for programing regardless of whether the errors had been corrected at some earlier date. If an error reappears as the first or second in the composition, the program will be reassigned. Experimental group subjects will therefore be assigned the same programs over the experimental period, depending on the recurrence of a given error. The control group will have its written language corrected by conventional teaching methods: i.e., errors in composition will be pointed out by the teacher.

Data: A test of grammar will be given all three groups prior to the experimental period, after 5 school weeks, and after a 6-month period. Compositions will be collected from all subjects at the same time and evaluated in terms of relative improvement in grammar. Statistics will consist of analysis of covariance.

Beginning and Ending Dates: June 1962 to July 1963

OE Grant: $18,009

Grantee: University of Pittsburgh, Pittsburgh, Pa.

Principal Investigators: Jack W. Birch, Professor; and E. Ross Stuckless, Instructor, Department of Special Education and Rehabilitation

979. INTRINSIC PROGRAMING OF PICTORIAL, AUDIO, AND PERFORMANCE FRAMES TO MAXIMIZE TRANSFER TO THE REAL LIFE SITUATION

Purpose: The objectives of the study are: (1) To test the effectiveness of programs used by two or three students at the same time. (2) To experiment with bypassing using different types of frames. (3) To explore the value of having special circuits for review questions at the end of a program in case of student failure. (4) To test the value of pictorial reinforcement questions. (5) To test the format of picture-print frames.

Procedure: The samples will comprise randomly selected college students. For the study of the effectiveness of programs used by two or three students, some students will be paired or grouped by similar and divergent scores on intelligence, reading comprehension, risk-taking proclivity, and a scale measuring ascendance-submission as determined by the Allport A–S Reaction Study. The pairing of the other students will be student-selected.

For the study of the format of picture-print frames, the picture plus print will be compared with the picture plus sound. Where useful, the picture will be combination of stills and motion.

Data: Data will include gain scores in achievement on the criterion test. Statistical techniques used will be analysis of variance, analysis of experience, or *t*-tests.

Beginning and Ending Dates: June 1962 to June 1964

OE Grant: $30,987

Grantee: Southern Illinois University, Carbondale, Ill.

Principal Investigator: Paul R. Wendt, Professor of Education

985. THE DEVELOPMENT OF A FILMED PROGRAM FOR TEACHING THE MANUAL ALPHABET

Purpose: To study the optimum form of stimulus presentation and learner response in programing and to apply the findings in the development of a filmed programed course in the instruction of the manual alphabet to both

deaf and hearing people who already know the English language.

Procedure: Several theories relative to size of step, pacing, cues, and overt versus covert response in programing will be tested on three groups of students who do not know the manual alphabet: (1) deaf elementary and secondary school students; (2) deaf college students; and (3) hearing graduate students.

Data: The independent variable will be the number of trials required to reach a specified level of proficiency in recognizing (reading) information displayed with the manual alphabet. Statistical techniques used will include analysis of variance.

Beginning and Ending Dates: June 1962 to June 1965

OE Grant: $47,236

Grantee: Gallaudet College, Washington, D.C.

Principal Investigator: Harry Bornstein, Director, Office of Institutional Research

988. A STUDY OF ATTITUDINAL CHANGE OF TEACHERS AND PUPILS TOWARD EDUCATIONAL TELEVISION

Purpose: To survey the attitudes of elementary and secondary school teachers and students toward educational television.

Procedure: The procedures will be as follows: (1) The construction and validation of three basic attitude scales for teachers and for elementary and secondary school students. (2) The administration of the scales to 2,000 elementary school pupils, grades 4–6; to 2,000 secondary school students, grades 7–12, and to 500 elementary and secondary school teachers. The individuals tested will use educational television on a formal, daily basis for 1 school year. (3) The readministration of the scales after the year of educational television viewing.

Data: In addition to the test data, additional information will be gathered on sex, grade level, intelligence, and school marks for the students and administrators' ratings and training in educational television utilization for the teachers. Statistical techniques will include means, standard deviations, standard errors, *t*-tests, and linear correlations.

Beginning and Ending Dates: June 1962 to May 1963

OE Grant: $6,760

Grantee: Indiana State College, Terre Haute, Ind.

Principal Investigators: Charles W. Hardaway, Director, Research and Testing; William E. Engbretson, Dean, School of Education, and Lawrence Beymer, Research Associate

991. A STUDY OF MOTION PICTURES IN EDUCATIONAL AND PSYCHOLOGICAL TESTING

Purpose: To examine experimentally the unique uses of motion pictures in the measurement of higher order mental abilities and emotional-social behavior.

Procedure: Existing instruments will be surveyed to identify general item types for translation from print to film-based presentation. Other film item types, not amenable to conventional, printed presentation, will also be developed using aspects of film such as movement, sequence, pacing, realism, and audiovisual interaction. Approximately 500 items will be produced and evaluated. Major emphasis will be on the study of: (1) ability areas such as cognition, memory, convergent and divergent thinking, and evaluation, and (2) personality, attitude, and interest. Peripheral studies of physical stimulus, response mode, and environmental conditions for film testing are also planned.

Film items will be presented to two groups of subjects: (1) "test-wise" individuals such as psychology staff members and graduate students; and (2) approximately 100 undergraduate students for whom the film items might eventually be appropriate.

Data: The "test-wise" group will provide critiques of the items, instructions, and time limits, and will make suggestions for improvement. The undergraduate students, through their response to the items, will provide data on item difficulty, discrimination, intercorrelation, and meaningfulness. Statistical treatment of the data will include item analysis, analysis of variance, and factor analysis.

Beginning and Ending Dates: June 1962 to November 1963

OE Grant: $50,957

Grantee: Purdue Research Foundation, Lafayette, Ind.

Principal Investigators: W. F. Seibert, TV Program Research Consultant; J. L. Senn, Head, Motion Picture Production Unit

996. THE ELEMENTARY SCHOOL SYSTEM IN RELATION TO TEACHING AND LEARNING METHODS

Purpose: To study the sociopsychological and structural factors related to the innovation and diffusion of new and unique teaching devices.

Procedure: Schools will be selected on the basis of several criteria: (1) size of community; (2) type of school system organization; and (3) access to and availability of specific educational devices. Eight schools will be selected—two from each of the four communities included in this project. Detailed studies of the social system of each sample school will be made. The specific techniques involved will include day-to-day observations by a participant observer during the course of the school year; personal interviews with each of the teachers, principals, and school board administrators in the sample school, and paper-pencil questionnaires. The participant observers will devote their time to noting and recording interpersonal relationships among school staff members (both formal and informal); the use of educational innovations, and expressed opinions and attitudes in regard to these innovations. Systematic data will be gathered on the introduction of innovation as well as on the diffusion process. In addition, data will be gathered which will seek to identify relationships between acceptance or rejection of innovations and sociopsychological background

factors, professional self concept, commitment to teaching and numerous social structural variables (i.e., clique formations, relationships between teaching staff and school administrators, student population composition, etc.). Finally, data will be collected noting the attitudinal changes occurring over a period of time toward the use of educational innovations. Appropriate tests of differences will be made on several analytical levels among individuals and between schools.

Beginning and Ending Dates: June 1962 to July 1964

OE Grant: $63,089

Grantee: Michigan State University, East Lansing, Mich.

Principal Investigators: David Gottlieb, Associate Professor, Sociology and Education, and W. B. Brookover, Professor, Education and Sociology

C-969. THE IMPACT OF MEDIA ON THE SCHOOL AS AN INSTITUTION

Purpose: To develop a scheme for analyzing the social systems of the school, to review and assess related research, and to plan an integrated program of research on the school.

Procedure: Four to six university staff members and graduate students will meet in a seminar to prepare position papers on the development of theory, bibliographic review, and visits to other campuses. Consultants will participate in the seminar and comment on the findings. Phase I will end in the preparation of review of the field and plans for the research under phase II, which will consist of related empirical studies.

Beginning and Ending Dates: June 1962 to August 1963

OE Funds: $39,910

Contractor: University of Missouri, Columbia, Mo.

Principal Investigator: Bruce J. Biddle, Associate Professor of Psychology and Sociology

C-1001. PSYCHOLOGICAL AND EDUCATIONAL FACTORS IN TRANSFER OF TRAINING—PHASE I

Purpose: To summarize and evaluate the experimental and theoretical studies of transfer; to formulate principles of transfer that apply to educational media, methods, and practices; to conduct preliminary studies of transfer, and to plan the second phase of research on the relationship of transfer to educational processes and media.

Procedure: The literature will be reviewed and analyzed. Sample students will be randomly assigned to groups for programed instruction in mathematics, logic, and statistics with the following variations: (1) Inductive vs. deductive methods; (2) Cognitive grouping vs. spiral sequencing; (3) Systematic deletion with terms constant vs. terms varied.

Performance will be measured by written tests and performance tasks. Statistical techniques will include analysis of variance and correlational techniques.

Beginning and Ending Dates: June 1962 to June 1964

OE Funds: $70,819

Contractor: University of Illinois, Urbana, Ill.

Principal Investigator: Lawrence M. Stolurow, Director of Training Research Laboratory

C-1057. A RESEARCH PROJECT TO IDENTIFY THE NEED FOR AND FEASIBILITY OF REGIONAL EDUCATIONAL MEDIA RESEARCH ORGANIZATIONS WITH A REGIONAL RESEARCH IMPROVEMENT ORIENTATION

Purpose: To determine the need for regional research centers and the availability of the resources for their organization and operation, and to establish the criteria, policies, and procedures for the establishment and operation of a nationwide system of research centers.

Procedure: A survey was made of the chief State school officers to determine the present status of educational media research. Thirty-one of the 50 survey forms were returned. As a result of the survey data, needs were identified. Recommendations concerning the establishment of a nationwide system of regional research organizations have been made on criteria, procedures for establishment and operation, evaluation, fiscal procedures, financial needs, and in particular, a proposal for a northwest educational research organization.

Beginning and Ending Dates: December 1961 to April 1962

OE Funds: $25,000

Contractor: State Department of Education, Salem, Oreg.

Principal Investigator: Allen Lee, Administrative Assistant to the Superintendent

C-1058. A RESEARCH REPORT ON OPERATIONAL PLANS FOR DEVELOPING REGIONAL EDUCATIONAL MEDIA RESEARCH CENTERS

Purpose: To study the need for and feasibility of establishing a complement of regional educational media research centers with a programatic orientation and to make recommendations concerning the development of operational plans.

Procedure: Six individuals with a background in research and media served as the planning committee. Thirteen conferences were organized in different regions of the country, in the following order: (1) Initial planning conference; (2) conference with representatives of national agencies to explore strategies and inform them of the planning project; (3) general exploratory conferences with representatives from colleges and universities, industry, and the Southern Regional Education Board; (4) independent group conferences with education, psychology, and engineer researchers; (5) a regional conference at the Pennsylvania State University, composed of representatives from colleges and universities, industry, textbook publishing companies, the Pennsylvania State Department of Public Instruction, a public school system, the U. S. Office of Education, and the Oregon Regional Educational Development Project.

Recommendations: The recommendations focused on the following: (1) The need for centers of research on learning and on educational media; (2) the necessary level of financial support for the establishment of centers; (3) the number and size of centers; (4) the responsibility and

function of the centers; (5) the role of the U. S. Office of Education; (6) the role of the New Educational Media Program. Title VII of the National Defense Education Act.

Beginning and Ending Dates: November 1961 to April 1962

OE Funds: $25,000

Contractor: The Pennsylvania State University, University Park, Pa.

Principal Investigator: C. R. Carpenter, Director, Division of Academic Research and Service

INDEX

Numerical List of Projects

No.	Page	No.	Page	No.	Page	No.	Page
835	3	873	6	939	8	985	11
837	3	875	6	946	9	988	12
841	3	876	6	960	9	991	12
843	4	880	6	961	9	996	12
845	4	886	7	962	10	C-999	13
847	4	891	7	968	10	C-1001	13
850	4	899	7	971	10	C-1057	13
863	5	907	7	977	11	C-1058	13
868	5	909	8	978	11		
872	5	914	8	979	11		

Grantees
Location, by State

ARIZONA

Arizona State University, Tempe—909
The University of Arizona, Tucson—914

CALIFORNIA

San Francisco State College, San Francisco—841
San Jose State College, San Jose—873
System Development Corporation, Santa Monica—968

DISTRICT OF COLUMBIA

Gallaudet College—985

ILLINOIS

Southern Illinois University, Carbondale—843, 979
University of Illinois, Urbana—835, C-1001

INDIANA

Earlham College, Richmond—977
Indiana State College, Terre Haute—988
Indiana University, Bloomington—962
Purdue Research Foundation, Lafayette—991

MASSACHUSETTS

Northeastern University, Boston—899

MICHIGAN

Michigan State University, East Lansing—996

MINNESOTA

University of Minnesota, Minneapolis—880, 891

MISSOURI

University of Missouri, Columbia—C-999

NEW YORK

Hunter College, New York—837
Rensselaer Polytechnic Institute, Troy—960
Syracuse University, Syracuse—850
University of Rochester, Rochester—845

OHIO

Ohio State University Research Foundation, Columbus—875, 876
Ohio University, Athens—863

OREGON

State Department of Education, Salem—C-1057
Teaching Research, Oregon State System of Higher Education, Monmouth—847, 886, 907, 971

PENNSYLVANIA

American Institute for Research, Pittsburgh—946
Department of Public Instruction, Harrisburg—961
Metropolitan Pittsburgh Educational Television Stations (WQED-WQEX), Pittsburgh—872
Pennsylvania State University, University Park—868, C-1058
University of Pittsburgh, Pittsburgh—939, 978

Principal Investigators

Archer, N. Sidney, Department of Public Instruction, Pa.—961
Asher, James John, San Jose State College, Calif.—873
Baker, Robert L., Arizona State University—909
Beaird, James H., Teaching Research, Oregon State System of Higher Education—971
Beymer, Lawrence, Indiana State College, Terre Haute, Ind.—988
Biddle, Bruce J., University of Missouri—C-999
Boguslavsky, G. W., Rensselaer Polytechnic Institute, N.Y.—960
Bornstein, Harry, Gallaudet College, Washington, D.C.—985
Briggs, Leslie J., American Institute for Research, Pa.—946
Brookover, W. B., Michigan State University—996
Carpenter, C. R., Pennsylvania State University—C-1058
Carter, Roy E., Jr., University of Minnesota—891
Coulson, John E., System Development Corporation, Calif.—968
Engbretson, William E., Indiana State College, Terre Haute, Ind.—988
Ewing, Thomas N., University of Illinois—835
Fattu, Nicholas, Indiana University—962
Frye, Charles H., Teaching Research, Oregon State System of Higher Education—847
Gilbert, William M., University of Illinois—835
Gottlieb, David, Michigan State University—996
Gropper, George L., Metropolitan Pittsburgh Educational Television Stations (WQED-WQEX), Pa.—872
Guba, Egon G., Ohio State University Research Foundation—875
Hardaway, Charles W., Indiana State College, Terre Haute, Ind.—988
Hickey, Albert E., Northeastern University, Mass.—899
Johnson, F. Craig, Ohio University—863
Kersh, Bert Y., Teaching Research, Oregon State System of Higher Education—886, 907
Krauser, Arthur W., University of Rochester, N.Y.—845
Lee, Allen, Oregon State Department of Education—C-1057
Myers, Lawrence, Jr., Syracuse University, N.Y.—850
McKeegan, Hugh F., University of Pittsburgh, Pa.—939
Patrick, Robert B., Pennsylvania State University—868
Popham, W. James, San Francisco State College, Calif.—841
Rust, Grosvenor C., Southern Illinois University—843
Sanzotto, Samuel M., Department of Public Instruction, Pa.—961
Schalock, Henry D., Teaching Research, Oregon State System of Higher Education—971
Schueler, Herbert, Hunter College, N.Y.—837
Schutz, Richard E., Arizona State University—909
Seibert, W. F., Purdue Research Foundation, Ind.—991
Senn, J. L., Purdue Research Foundation, Ind.—991
Silberman, Harry, System Development Corporation, Calif.—968
Smith, M. Daniel, Earlham College, Ind.—977
Spohn, Charles L., Ohio State University Research Foundation—876
Stolurow, Lawrence M., University of Illinois—C-1001
Stuckless, E. Ross, University of Pittsburgh, Pa.—978
Torrance, E. Paul, University of Minnesota—880
Wendt, Paul R., Southern Illinois University—979
Wolf, Willavene, Ohio State University Research Foundation—875
Yoshino, I. Roger, University of Arizona—914

Type of Projects

MEDIUM

Audio recordings—876, 880, 996, C–1001
Broadcast television—872, 875, 891, 996
Closed-circuit television—850, 863, 875, 988, 996, C–1001
Motion pictures—868, 875, 886, 971, 991, 996, C–1001
Still-projected media—960, 996
Teaching machines—835, 841, 843, 845, 847, 863, 873, 876, 899, 907, 909, 939, 946, 961, 962, 968, 977, 978, 979, 985, 996, C–1001
Video recordings—837, 875, 996, C–1001
Other—847, 886, 914, C–999, C–1057, C–1058

SUBJECT

Biological science—872, 946
Counseling and guidance—835, 837, 991
Fine arts—876
Foreign language—873
Humanities—843, 850, 939, 946, C–1001
Language arts—863, 880, 909, 946, 978, 985
Mathematics—841, 845, 847, 899, 907, 909, 946, 977, C–1001
Physical sciences—850, 872, 880, 960, 977
Social and behavioral sciences—850, 863, 868, 880, 886, 891, 914, 946, 960, 971, 979
Unspecified or other—845, 875, 961, 962, 968, 988, 996, C–999, C–1057, C–1058

INSTRUCTIONAL LEVEL

Kindergarten–Grade 2—845, 985
Grades 3–4—845, 875, 880, 909, 946, 960, 985, 988
Grades 5–6—841, 872, 875, 907, 909, 946, 960, 985, 988
Grades 7–9—847, 872, 891, 946, 960, 985, 988
Grades 10–12—891, 899, 946, 960, 977, 985, 988
College (undergraduate)—835, 843, 850, 863, 868, 873, 876, 886, 899, 914, 960, 971, 977, 979, 985, 991
Graduate school—837, 939,
Adult Education—988
Unspecified—961, 962, 968, 978, 996, C–1001

AUDIENCE CHARACTERISTICS (Other Than General)

Physically Handicapped—978, 985
Unspecified—961, 996

U.S. GOVERNMENT PRINTING OFFICE : 1963 O—691-035

UNITED STATES
GOVERNMENT PRINTING OFFICE
DIVISION OF PUBLIC DOCUMENTS
WASHINGTON, D.C. 20402

OFFICIAL BUSINESS

PENALTY FOR PRIVATE USE TO AVOID
PAYMENT OF POSTAGE, $300